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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,686	10/31/2003	Patricia Brown	100203623-3	2884

7590 04/18/2005

IP ADMINISTRATION  
LEGAL DEPARTMENT M/S 35  
HWELETT-PACKARD COMPANY  
P.O. BOX 272400  
FORT COLLINS, CO 80527-2400

EXAMINER

LEVIN, NAUM B

ART UNIT	PAPER NUMBER
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2825

DATE MAILED: 04/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/698,686

Applicant(s)

BROWN ET AL.

Examiner

Naum B. Levin

Art Unit

2825

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3,6,7,12,13,29 and 31-70 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,6,7,12,13,29 and 31-70 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This office action is in response to application 10/698,686 and amendment filed on 02/07/2005. Claims 1-3, 6-7, 12-13, 29 and 31-70 remain pending in the application.

Applicants have amended independent claims by adding supplementary limitations, and created new dependent claims 56-70. Based on the Amendment Examiner has performed additional search, and found a new reference.

### ***Claim Objections***

1. Claim 2 is objected to:

the recitation of "using the device in an apparatus" is not clear to what applicants intend to mean.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 6-7, 12-13, 29 and 31-70 are rejected under 35 U.S.C. 103(a) as being unpatentable by Alvarez et al. (US Pub. No.: 20020184579) in view of Novak et al. (US Patent 6,046,952).

3. As to claims 1, 29, 31, 33, 36, 42, 43, 54 and 55 Alvarez discloses system and method for recognizing and configuring devices embedded on memory modules including:

(1), (29), (54) A method/device/assembly for producing a device having a reduced memory capacity comprising:

providing a device (memory modules) having a memory capacity ([0003]; [0005]);

determining that the memory capacity of the device can be reduced (compressed) ([0015]- [0018]);

determining an amount by which the memory capacity of the device is to be reduced (compressed) ([0170]); and

reducing the memory capacity of the device in accordance with the determined amount to produce a device having a reduced memory (active memory) capacity and a dormant memory (inactive memory) capacity ([0170]).

(31), (43) An assembly comprising an apparatus/apparatus; and a device disposed in said apparatus and having a reduced memory capacity and a dormant memory capacity, wherein a memory capacity of the device is reduced in accordance with a determined amount in order to achieve the reduced memory (active memory) capacity ([0003]; [0005]; [0015]- [0018]; [0170]);

(33) A computer assembly comprising a computer; and a dual inline memory module (DIMM) disposed in said computer and having a reduced memory capacity and a dormant memory capacity wherein a memory capacity of the DIMM is reduced in accordance with a determined amount in order to achieve the reduced memory (active memory) capacity ([0003]; [0005]; [0015]- [0018]; [0170]);

(36), (42) A method/device for producing a device having a reduced memory capacity, the method comprising:

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providing a device having a memory capacity ([0003]; [0005]);  
determining an amount of reduction for the memory capacity of the device  
([0170]); and  
reducing the memory capacity of the device by an amount of reduction in order to  
produce a device having a reduced memory capacity and a dormant memory capacity  
([0170]);

(55) An assembly comprising an apparatus; and a device disposed in said  
apparatus and having a reduced memory capacity (active memory) and dormant  
memory (inactive memory) capacity comprising, wherein said device having been  
produced in accordance with the following steps ([0170]):

providing a device (memory modules) having a memory capacity ([0003]; [0005]);  
determining that the memory capacity of the device can be reduced  
(compressed) ([0015]- [0018]);

determining an amount by which the memory capacity of the device is to be  
reduced (compressed) ([0170]); and

reducing the memory capacity of the device in accordance with the determined  
amount to produce a device having a reduced memory (active memory) capacity and a  
dormant memory (inactive memory) capacity ([0170]).

With respect to claims 1, 29, 31, 33, 36, 42, 43, 54 and 55 Alvarez teaches the  
features above but lacks a method/device/assembly/apparatus for producing a device  
having a reduced memory capacity and a dormant memory, wherein the memory

capacity is reduced by inactivating at least one row of a memory bank of the device or at least one column of the memory bank of the device.

As to claims 1, 29, 31, 33, 36, 42, 43, 54 and 55 Novak in view of Alvarez recites:

A method/device/assembly/apparatus for producing a device having a reduced memory capacity and a dormant memory (idle/unavailable memory during refresh memory cycle), wherein the memory capacity is reduced by inactivating (doing unavailable during refresh) at least one row of a memory bank of the device (DIMM) or at least one column of the memory bank of the device (col.1, ll.47-53; col.2, ll.58-63; col.3, ll.61-67; col.4, ll.1-8; col.4, ll.30-65; col.6, ll.32-44).

It would have been obvious to a person of ordinary skills in the art at the time the invention was made to employ Novak's teaching regarding the method/device/assembly/apparatus for producing a device having a reduced memory capacity and a dormant memory, wherein the memory capacity is reduced by inactivating at least one row of a memory bank of the device or at least one column of the memory bank of the device and use it in Alvarez's invention to increase allowability for interleaved memory accesses within a particular memory device, thereby yielding the total size of the main memory in the computer system.

4. With respect to dependent claims 2-3, 6-7, 12-13, 32, 34, 37-41 and 44-53 Alvarez teaches all the features above.

5. With respect to claims 56-70 Alvarez teaches the features above but lacks a method/device/assembly/apparatus for producing a device having a reduced memory

capacity and a dormant memory, wherein inactivating at least one row or one column comprises making one row or column as dormant and unaddressable.

As to claims 56-70 Novak in view of Alvarez recites:

A method/device/assembly/apparatus for producing a device having a reduced memory capacity and a dormant memory, wherein inactivating at least one row or one column comprises making one row or column as dormant and unaddressable, and the reduced memory capacity is equal to a memory capacity of another device (DIMM) that is to be replaced in a computer (col.1, ll.47-53; col.2, ll.58-63; col.3, ll.61-67; col.4, ll.1-65; col.5, ll.12-21; col.6, ll.32-44).

It would have been obvious to a person of ordinary skills in the art at the time the invention was made to employ Novak's teaching regarding method/device/assembly/apparatus for producing a device having a reduced memory capacity and a dormant memory, wherein inactivating at least one row or one column comprises making one row or column as dormant and unaddressable and use it in Alvarez's invention to increase allowability for interleaved memory accesses within a particular memory device, thereby yielding the total size of the main memory in the computer system.

#### **REMARKS**

6. Accordingly, **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within


TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naum B. Levin whose telephone number is 571-272-1898. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on 571-272-1907. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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VUTHE SIEK  
PRIMARY EXAMINER